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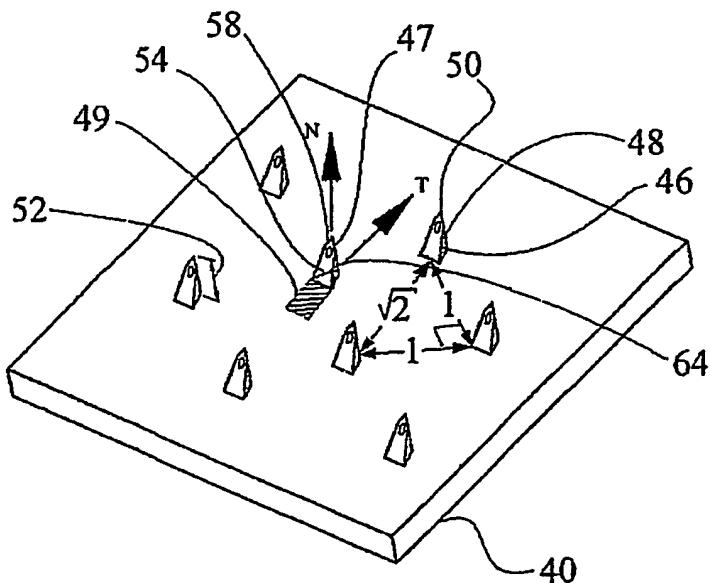
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*[Continued on next page]*

(54) Title: ENHANCED PENETRATION SYSTEM AND METHOD FOR SLIDING MICRONEEDLES

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effective area is defined as an area marked out by translating the base area of the leading microneedle, by the height of the leading microneedle, in a direction opposite to the sliding direction.

(57) Abstract: A microneedle device for transporting fluid through a surface of a biological barrier, the device including a fluid transport configuration, an abutment member and a displacement device. The fluid transport configuration includes a substrate having a substantially planar surface having a plurality of microneedles projecting therefrom. The abutment member has an abutment surface for abutting the biological barrier. The displacement device is configured for generating a relative lateral sliding movement between the surface of the biological barrier and the fluid transport configuration in a sliding direction of the microneedles. The microneedles are arranged so that a leading microneedle defines an effective area which is void of another microneedle. The



SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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